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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,021	12/10/2003	Hidetoshi Aoki	Hokushin-6	8625

54884 7590 10/03/2006

GOMEZ INTERNATIONAL PATENT OFFICE, LLC  
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WILMINGTON, DE 19806

EXAMINER

MULCAHY, PETER D

ART UNIT PAPER NUMBER

1713

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/734,021

Applicant(s)

AOKI ET AL.

Examiner

Peter D. Mulcahy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5 and 6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 8/7/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Angell et al. US 5,962,169.
4. The rejection set forth under 35 USC 102 in the paper mailed 3/27/06 is deemed proper and is herein repeated. Applicants arguments regarding this rejection have been fully considered but have been found not persuasive. Further, the rejection has been slightly modified so as to include an obviousness for the following reasons: The patent

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is silent as to adding the ionic liquid to “rubber”. The patent does teach adding the ionic liquid to polymeric compounds. The polymeric compounds identified at column 5 lines are not characterized as rubbers but are indicated as forming a “rubbery” material. The examiner maintains that the polymeric materials can have properties which fall within the scope of the claim term “rubber”. It would be obvious to select a polymeric material from the list which has properties which render it a “rubber”. Further, it is reasonable to presume that the polymeric materials listed are inherently rubbery given that the patent describes them as such.

5. Applicants argue this rejection by attempting to distinguish the claimed “ionic liquid” from an “ion compound” mentioned in the art. This is not persuasive. The art specifically identifies molten liquid salt compounds as the ionic liquids, see column 4 lines 58+. The examiner can find no difference between the salt compounds claimed and those of the prior art.

6. Applicants then point out that the relative amounts of salt and polymer used in the art are different from those of the prior art. This is not persuasive. There are no claim limitations relative to the amounts of the ingredients.

7. Applicants should note that an ionic conductor, which is liquid, falls within the scope of an “ionic liquid.”

8. The rejection(s) over Takashima et al., Michot et al. and Kitano et al. are withdrawn. This is not necessarily in view applicants arguments but rather the prior art relied upon herein appears closer to the claimed invention.

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9. Claims 1-3, 5 and 6 are rejected under 35 U.S.C. 102(b or e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over any one of Murphy US 2002/0010291 or Schmidt et al. US 2006/0100323 or Boussand et al. US 2004/0116615.

10. Murphy extensively discloses ionic liquids which can be the same salt species as claimed, see the abstract and [0034]-[0054]. The addition of the ionic liquids to rubber compounds is anticipated and/or obvious from [0033] and the examples.

11. Schmidt et al. discloses ionic liquids which can be the same salt species as claimed, see [0027]. The addition of the ionic liquids to rubber compounds is anticipated and/or obvious from [0043].

12. Boussand et al. extensively discloses rubber compounds, see the abstract and [0001]-[0008]. The addition of the ionic liquids to rubber compounds is anticipated and/or obvious from [0016] and the examples.

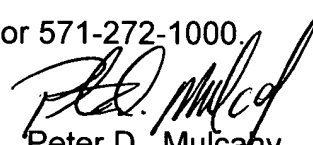
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter D. Mulcahy whose telephone number is 571-272-1107. The examiner can normally be reached on Mon.-Fri. 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Peter D. Mulcahy  
Primary Examiner  
Art Unit 1713

9/15/06